IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

In re the Application

Inventor	:	MUTH
Application No.	:	10/517,673
Filed	:	07/11/2005
For	:	METHOD AND CHIP UNIT FOR ADDRESSING AND/OR ACTIVATING A USER OF A SERIAL BUS

APPEAL BRIEF

On Appeal from Group Art Unit 2116

Date: 6/2/2008

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Michael Ure
(Name)

(Signature and Date)

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I. REAL PARTY IN INTEREST

The real party in interest is NXP B.V., the successor in interest to the present assignee of record of the present application, Koninklijke Philips Electronics N.V., and not the party named in the above caption.

II. RELATED APPEALS AND INTERFERENCES

With regard to identifying by number and filing date all other appeals or interferences known to Appellant which will directly effect or be directly affected by or have a bearing on the Board's decision in this appeal, Appellant is not aware of any such appeals or interferences.

III. STATUS OF CLAIMS

Claims 22-27 are pending, all of which stand finally rejected and form the subject matter of the present appeal.

IV. STATUS OF AMENDMENTS

All amendments have been entered. No amendment after final rejection has been submitted.

V. SUMMARY of the CLAIMED SUBJECT MATTER

The present invention relates to a controller for a bus such as a CAN (Control Area Network) bus. A transceiver is provided separately from a protocol controller and an application unit (such as a microcontroller). The transceiver monitors the bus for

traffic, and when traffic is detected, causes voltage to be supplied to the protocol controller before voltage is supplied to the application unit. The protocol controller is provided with a crystal oscillator input signal and hence is able to determine more accurately than the transceiver whether the traffic is for this particular user, or node. If so, the transceiver is signaled to then cause voltage to be supplied to the application unit. Power savings is thereby achieved.

The following analysis of independent claim 22 is presented for convenience:

Element	Figure(s)	Paragraph(s) and/or page(s)
22. A method of activating an application controller unit that is coupled a Controller Area Network bus and that carries out an application, comprising:	Fig. 2, 44	Page 6, lines 21-29
a transceiver unit receiving an incoming message occurring on the data bus; and	Fig. 2, 34	Page 6, lines 3-10
the transceiver unit causing a protocol controller unit coupled to the application controller unit to be supplied with voltage first, before the application controller unit is supplied with voltage;	Fig. 2: 32, 42	Page 6, lines 3-10 and 21-29
wherein the transceiver unit and the protocol controller unit are provided on different integrated circuits, and wherein the protocol controller unit is provided with a crystal oscillator input signal.	Fig. 2: 34, 42	Page 6, lines 16-20

The following analysis of independent claim 25 is presented for convenience:

Element	Figure(s)	Paragraph(s) and/or page(s)
25. A system comprising for use with a Controller Area Network data bus, the system comprising:	Fig. 2	
an integrated circuit comprising a transceiver unit coupled to the data bus; and	Fig. 2, 34	Page 6, lines 3-10
separate from said integrated circuit:	Fig. 2	Page 6, lines 3-10
a protocol controller unit having a crystal oscillator input signal and coupled to the transceiver unit; and	Fig. 2, 42	Page 6, lines 3-10
an application controller unit coupled the protocol controller unit and coupled to the transceiver unit;	Fig. 2, 44	Page 6, lines 21-29
wherein the transceiver unit causes the protocol controller unit to be supplied with voltage first, before the application controller unit is supplied with voltage.	Fig. 2: 34, 42, 44	Page 6, lines 3-10 and 21-29

VI. GROUNDS of REJECTION to be REVIEWED ON APPEAL

The issues in the present matter are whether:

1. under 35 USC 103, claims 22-26 are unpatentable over Heinrich in view of Hanf I (U.S. Patent 5,892,893).

2. under 35 USC 103, claim 27 is unpatentable over Heinrich in view of Hanf I (U.S. Patent 5,892,893) and further in view of Hanf II (U.S. Patent 6,438,462).

VII. ARGUMENT

I. Rejection of Claims 22-26 as Unpatentable Over Heinrich in View of Hanf I

The rejection contends that Heinrich teaches the present invention except for the transceiver and protocol controller being provided on different integrated circuits, and that Hanf I provides this teaching. Applicant respectfully disagrees.

As shown in Heinrich Fig. 2, an interface IF is connected to a CAN bus (13,15). Under certain conditions, the interface activates a voltage controller UR, thus activating a microcontroller MC. These conditions are described at col. 6, lines 39-43 of Heinrich, and include an address filter in the interface determining that the particular node is being addressed.

The rejection contends that "the 'protocol controller unit' is provided with a crystal oscillator input signal (lines 36-67 of column 10 mention that a quartz oscillator is provided in the system for synchronization. The clock master with quartz oscillator reacts (sic) emission of a predetermined clock definition bit sequence. Fig. 3 shows that ASR receives bit sequences Rx. Thus, quartz oscillator input is provided to the protocol controller)."

Applicant submits that the interpretation urged by the Examiner is not a reasonable one.

The clock signal that is synchronized periodically to a clock master having a quartz oscillator is the clock signal MCclk (Heinrich Fig. 6) provided to the microcontroller. The clock signal provided to the "protocol controller" (address filter) is a

bitclock BITclk derived as illustrated in Heinrich Fig. 4 from an internal clock CLKint. The internal clock CLKint is not synchronized to the clock master.

Moreover, the signal MCclk of Heinrich is not the same as "a quartz oscillator input signal." (If it were, periodic synchronization would not be required.) It would of course not have been obvious to provide such a quartz oscillator input signal, as an explicit object of Heinrich is to avoid duplication of quartz oscillators.

Hence it may be seen that claim 22 patentably defines over the cited references.

Claim 23 relates to handshaking between the transceiver unit and the protocol controller. As the transceiver unit and "protocol controller" of Heinrich are part of the same circuit, no such handshaking occurs.

Nor does such handshaking occur in Hanf I. Rather, in Hanf I, bus activity detected by a chip 100 activates a voltage regulator 20, which supplied voltage to both a protocol controller 22 and a microcontroller 21. Because no further activation is required on the part of the chip 100, there is no handshaking as in the present invention.

With regard to dependent claim 24, it depends from independent claim 22, which has been shown to be patently distinguishable over the cited reference. Accordingly, it is also patently distinguishable and allowable over the cited references by virtue of their dependency upon an allowable base claim.

Independent claim 25 may be seen to be patentable for much the same reasons as claim 22. That is, the proposed combination fails to teach or suggest at least "a protocol controller unit *having a crystal oscillator input signal* and coupled to the transceiver unit."

With regard to dependent claim 26, it depends from independent claim 25, which has been shown to be patently distinguishable over the cited reference. Accordingly, it is also patently distinguishable and allowable over the cited references by virtue of their dependency upon an allowable base claim.

With respect to claim 27, Hanf II (Fig. 14; col. 35, lines 15-45) was cited as supposedly suggesting first and second voltage regulators for supplying the protocol controller and application controller units, respectively, as claimed. This is not correct.

In Hanf II, a *single regulator* 20U (Fig. 14) supplies ***both*** the protocol controller 22 and the application controller 21 (See Fig. 23). The fact that Hanf II teaches the use of two regulators is therefore not relevant to the present invention. Incidentally, the other regulator (20A) supplies interface circuitry (Fig. 23, 163), described in Hanf II as an "input/output interface which is connected downstream of the microcontroller in the direction of the application and serves to receive application-specific sensor signals and to drive requisite actuators, etc. The implementation and integration of such a semiconductor circuit is possible, but proves to be cost-intensive in relation to the range of applications that can be covered by such a special module." (Col. 2, lines 40-47.)

Hence it may be seen that the proposed combination does not teach or suggest the invention of claim 27.

In view of the above, applicant submits that all of the above referred-to claims are patentable over the teachings of the cited references.

VIII. CONCLUSION

In view of the above analysis, it is respectfully submitted that the referenced teachings, whether taken individually or in combination, fail to anticipate or render obvious the subject matter of any of the present claims. Therefore, reversal of all outstanding grounds of rejection is respectfully solicited.

Date: 6/2/2008

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IX. APPENDIX: THE CLAIMS ON APPEAL

22. A method of activating an application controller unit that is coupled a Controller Area Network bus and that carries out an application, comprising:

a transceiver unit receiving an incoming message occurring on the data bus; and

the transceiver unit causing a protocol controller unit coupled to the application controller unit to be supplied with voltage first, before the application controller unit is supplied with voltage;

wherein the transceiver unit and the protocol controller unit are provided on different integrated circuits, and wherein the protocol controller unit is provided with a crystal oscillator input signal.

23. A method as claimed in claim 22, wherein the protocol controller unit is addressed by the incoming message, comprising:

the transceiver unit conveying the incoming message to the protocol controller unit;

the protocol controller unit comparing the incoming message with a reference message that is associated with the application and is stored in the protocol controller unit;

if there is a match between the incoming message and the reference message, the protocol controller unit sending an acknowledgement to the transceiver unit; and

the transceiver unit, in response to the acknowledgement, activating the application controller unit.

24. A method as claimed in claim 22, wherein the application controller unit is only supplied with voltage if the incoming message and the reference message match.

25. A system comprising for use with a Controller Area Network data bus, the system comprising:

an integrated circuit comprising a transceiver unit coupled to the data bus; and

separate from said integrated circuit:

a protocol controller unit having a crystal oscillator input signal and coupled to the transceiver unit; and

an application controller unit coupled the protocol controller unit and coupled to the transceiver unit;

wherein the transceiver unit causes the protocol controller unit to be supplied with voltage first, before the application controller unit is supplied with voltage.

26. The system of claim 25, said integrated circuit comprising a first voltage regulator for supplying the protocol controller unit with voltage in the event an incoming message occurs on the data bus.

27. The system of claim 25, said integrated circuit comprising a second voltage regulator for supplying voltage to the application controller unit in the event of a match between an incoming message that occurs on the data bus and a reference message stored in the protocol controller unit.

X. APPENDIX: RELATED PROCEEDINGS

NONE

XI. APPENDIX: EVIDENCE

NONE